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THOMAS G. NEWMAN, EDITOR.

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EDITORIAL BUZZINGS.

To Kiss her cheek! as honey fine
The bee from rose or eglantine
Doth sip, so I from dimple cute
Would taste of love's delicious wine!
What could a knight (or bee) compute
Dearer than such delight divine?

Pure ammonia is a good remedy for bee-stings.

We Regret to learn that Mr. John G. Smith, Secretary of the Central Illinois Bee-Keepers' Society, met with an accident on his way home from the Clayton Convention. While on the train between Bluff City and Barry, a cinder lodged in his eye, which caused him severe pain for several days. Since then he has been indisposed from the results of a severe cold in the head. His many friends will be sorry to learn these particulars of his illness, and with us will no doubt offer him their sympathy.

A Correspondent in central New York writes us concerning the complaint against Mr. McCaul, published on page 750, and states that he is still doing business at 122 Water Street, New York. We have written to him, at that address, calling for a settlement for the Florida honey, and await a reply. Our correspondent adds: "Mr. McCaul has sold hundreds of dollars worth of honey for me, and always rendered an accurate account, at good prices." If he will do the same for the Florida honey, and satisfactorily explain the cause of the delay in remitting for it, after having sold it for cash long ago, Alderman & Roberts will no doubt be very glad to state the fact as publicly as they made the complaint.

Why was Mr. Doolittle Not There?—That question is often asked about bee-conventions, but it has never been publicly answered. We have known the reason for some years, and when Mr. Doolittle's name was mentioned for President of the International at Columbus, we suggested that Mr. Doolittle was not a member, and was therefore not eligible. We did this to have his name dropped, and still not give the *real* reason. Then one enthusiastic member paid the dues for his friend Mr. Doolittle, so as to make him eligible to the office. This made it necessary to take another tack, for we had never felt authorized to state the true reason. The result was that Dr. Mason was re-elected.

Then our friend Doolittle wrote to us asking why his name appeared among the members, when he had not paid any dues. We replied with the above facts, and this is his reply:

FRIEND NEWMAN:—Your letter regarding to how I came to be a member of the North American Bee-Keepers' Association is at hand. Thanks to that friend who so kindly paid my membership fee, but I am sincerely glad that I was not made President. If anything of the kind ever again comes up where you are, please say for me that I cannot accept the office on any account. I have a heart trouble that excitement makes much worse, and being away from home at conventions, etc., puts me in such a condition that I am wholly unfitted to assume any office, or take any comfort in the proceedings of a convention. For this reason I have staid at home, of late.

G. M. DOOLITTLE.

As the above question is so often asked, we take the liberty of publishing friend Doolittle's letter, without his knowledge or consent, just to reply to the many similar inquiries to the one at the head of this article, which are so frequently propounded. We know of no one more worthy of the honor of being President of the "International," and so stated at the convention, but his wishes should be consulted. In the higher sense we know his "heart is right," even if physically he has a "heart trouble"—which has not been generally known till this announcement.

Gone to California.—Our friend A. I. Root has taken his departure for California, going by way of New Orleans, for a six weeks' sojourn. *Gleanings* for Nov. 15, says that he left on the 12th inst., and then it adds:

He has worked long and hard at his post; and while some of us at home will have to work a little harder, perhaps, in his absence, it is a pleasure to us to think that he has now arrived at that point in life when he can take this change and rest, which he so richly deserves. He will furnish notes of travel by the way, besides telling of that great bee-country—California—a country whose resources seem boundless, and about which we bee-keepers of the East know comparatively little.

The Appeal in the lawsuit against Z. A. Clark, of Arkadelphia, Ark., was to be called for Monday, the 26th inst. In our next issue we hope to be able to record some good news concerning it.

Governmental Statistics.—At the late meeting of the National Board of Trade, a resolution was presented recommending the "discontinuance of monthly crop bulletins by the department of agriculture, as their only effect had been to disturb the world's markets without giving any reliable information." One of the members remarked as follows:

The statistician of the department has been continually representing the annual produce of grain in this country as enormously in excess of what it was. The report of last year was so ambiguous in its language that nobody could understand it, particularly that part concerning the wheat crop. The Secretary of the Chicago Board of Trade endeavored to ascertain what this meant, and had made frequent interrogations. The statistician, for instance, represented in his returns that the spring wheat crop last June was 13 bushels to the acre.

Now, the average produce per acre was 12 bushels. The fact was that the spring wheat crop was more than a month late last year, and was far behind the average. A farmer in Indiana reads the reports of the statistician, and makes up his mind that there is a big crop in the country, and that he will sell all he has got. He finds out, when it is too late, that the crop is meager, and that he has lost heavily. The returns of last year, prepared in the month of December, showed a produce of 11,000,000 bushels in excess of the later and perfected returns prepared three months afterward. The result of the whole thing was encouragement for the operations of English bears, and injurious to American agriculture.

After some discussion a substitute resolution was adopted, which provides for the establishment of reporting agencies throughout the country, which will collect and furnish to the bureau all the necessary information regarding the crops of the country, and provides several other improvements in the machinery of the department.

This is similar to the work undertaken by apiarists, after waiting some time for the governmental reports through the statistician, on bee and honey statistics.

☞ **The National Bee-Keepers' Union** fiscal year has heretofore ended on June 30. Sometime since it was proposed to have it end with the calendar year. It was submitted to vote, and every vote so far received is of the same tenor as the following from Mr. H. K. Staley, Pleasant Ridge, Ohio:

At the request of the Manager of the Bee-Keepers' Union, for the members to vote on the proposed change for the paying of the annual dues from June to January, I vote in the positive, or in other words, I favor the change.

If any one wants to vote in the negative, please let it come at once; if none are received by Dec. 10, the motion will be declared to be carried, and the change made accordingly, by consent.

This change will make the time for paying dues and voting for officers come on Jan. 1, and blanks will be sent out on Dec. 15, for that object—unless somebody votes against the change.

GLEANS OF NEWS.

Preparing Bees for Winter.—Mrs. L. Harrison describes some of her experiences while preparing her bees for winter, in the *Prairie Farmer*. She says that she found the bees in fine condition, the colonies being very populous, with a sufficiency of sealed honey for winter stores. She then adds:

Although the weather is fine and warm for working out-of-doors, it would have been better to have fixed them up earlier, for as long as they can gather honey they are easily handled; but when there is none to gather, they are on the war-path with the least provocation. Bees act very differently on a cold day than on a warm one, when smoke is blown upon them. On a warm day, when smoke is blown upon them, they rush down among the combs and fill their sacs with honey, when they are as good-natured as a fat alderman after dinner; but when it is cold, they rush into the smoke and right into the fire, if they can gain access to it, and perish.

This is one reason why bees are so cross when there is no honey in the fields. Let a hive be opened on these mild, warm days, when bees are on the wing, and robbers will soon appear. Their clarion note soon arouses the colony, which will be on the defensive, and stinging everything within reach. The dog will be off with a roll and a howl, biting and scratching; the cat will dart up a tree with her tail as large as a rolling-pin, while the chickens scratch their combs with their feet, and seek shelter under weeds and bushes. To avoid this I open and fix up colonies in the early morning, before there are any bees flying, and if I am very careful not to jar or knock the hive, I can get through with quite a number without the use of smoke, or robbing induced.

There has been but a small amount of surplus honey secured this year, but what has been secured is in good condition. Some years there is a little honey scattered through many sections—little patches of sealed honey not larger than a dollar in the center of some—but, this year, whatever they undertook, they finished up in good shape. Those sections last year that had little patches of honey in them, were uncapped, extracted, and stored away for use this year. Now we find that they have been put to good use.

The Same Old Queen, more than 40 years old! This is what the old Californian, Wall, tells about the age of a queen-bee. The Napa *Register* gives this laughable account of the old "Forty-niner:"

Many are familiar with Mr. Wall's extraordinary feat, in 1849, of driving (according to his statement) a swarm of bees across the plains. A day or two since, as one of our business men was coming down town, he happened to discover a huge bee quietly resting on Wall's shoulder, as preparations were being made to sprinkle the Court House lawn. "Say, Wall, what are you going to do with that bee on your shoulder?"

Wall was startled for a moment, but, recovering his usual composure, spoke with gravity, carrying convictions of untarnishable truth, "I'll tell you. That bee is the queen of the swarm that I drove across the plains. She has been hunting me for years, and knew me the moment I call her name. You see, she is getting a little gray, but I know her on sight. She piloted the swarm, and I used to feed her from my own molasses can. That bee is the last of her race, and I shall take care of her in her old age. I tell you, John, that bee brings up many reminiscences of that memorable trip. Several times that swarm stood by me in an hour of peril. They could scent an Indian several miles away, and they got to really enjoy an Indian attack. The fact is, they understood tactics as well as the best trained soldiers. When the queen sounded an alarm, every bee was under arms, ready for fight. First a skirmish line was thrown out, and you could see more or less uneasiness among the redskins as one and another would claw about his ears, eyes, or nose, but when the order to 'charge' was sounded, and the bee-battalions began to move in 'double-quick,' a rout and stampede always followed. It is a fact, John. Those bees fought all of my battles across the plains, and this is my 'old queen' sure enough."

Do Not Sell all the honey you have. Keep what is necessary for use in the family. Mr. C. H. Dibbern tells some of his experience in this connection in the *Western Plowman* in these words:

I have no patience with that class of bee-keepers who think they cannot afford to eat honey and supply it on their tables. I well remember when I was a boy, working out during vacation, how carefully I attended a few colonies of bees in the old way; how I hived them, and put on the boxes, for the owner, who was afraid of them; how anxiously I watched the white combs through the little piece of glass as they neared completion; how finally the eventful time came, and one evening I removed the boxes (we knew nothing about sections then) from the hives. I left the boxes near the hives over night, so that the bees could run back during the night, which was the common practice then. As there were still some bees in them next morning, they were removed to the cellar, leaving the door slightly open, so that the bees could find their way out.

Like a boy, I had been anticipating the "good time coming" when we would be feasting on honey. I waited patiently for some days after this, for the appearance on the table of the beautiful comb honey, but none came. Finally I ventured to ask what had become of the honey, when I was informed that it had all been taken to town and sold; that they could not afford to eat honey when they could get 15 cents per pound for it. I said nothing, but thought a great deal for a long time; in fact, I have not got over it yet, although I have produced carloads of honey since.

Dark or Fall Honey.—Late honey, which is usually dark, or in some localities of a golden color, should be sold, whether extracted or in the comb, for just what it is. If you have any "honey-dew" or poor trash, do not try and work it off by hiding it in the middle of the cases, and exposing only nice white combs. Such practice may be sharp, but it is dishonest, nevertheless, and it will be sure to re-act on the guilty bee-keeper. Such usually find their home market "played out," and have to resort to shipping.

Partly-Filled Sections.—Partly-filled sections should be extracted before it gets very cold, as the honey soon gets too thick to run freely. I used to consider these empty combs of great value for use the next season, but nice comb foundation has changed all this. I now cut out all combs that have been extracted, and melt them up by placing them in a large dish-pan over a pot of boiling water. When all is melted, let it cool, and you will have a nice cake of wax, and some very nice honey.

Use no Soiled Sections.—Burn up all sections that are not nice and clean. It is poor economy to have nice white honey stored in old dirty boxes. If we wish to hold our customers for our honey, we must always have it in the best possible condition.

Colors and Bees.—In *Vick's Magazine* for October we find the following on flower colors and their visitors, the bees:

All through creation appears a considerateness, a taking thought for the pleasures of slight beings, very moving and comforting to see. Not a wood-tick or red spider, or hard working bee but is meant to be happy as well as useful, and while we take the world with a sublime conceit of its being all for us, we find that certain pleasures were designed peculiarly for insignificant beings on whom we do not waste a thought.

If the flowers are dyed in every warm, enticing hue, it is not for us alone, but to draw the honey-seeking insects which have a fine eye for color.

To test this power in bees, Sir John Lubbock tried a pretty experiment, placing some honey on a slip of glass laid on blue paper outside his study window, and when a bee had made several journeys and become used to the color, laying an orange slip with honey in its place, and the blue further away. The bee came back, finding the honey in the same spot, but it preferred the blue color, and pausing a moment darted for the blue paper.

The Cause of Failure of the honey crop for 1888 is thus stated in the *Michigan Farmer* for last week:

The Central Michigan Bee-Keepers' Association ascribed the cause of the failure in the honey crop to the following reasons: The bees have been remarkably free from all disorders. The trouble lay in the failure of nature to properly perform her duty. The chalices of flowers, from which the bees collect the sweet semi-fluid substance contained but little nectar. A close observer states that the absence of this substance was due to the atmosphere and the direction of the winds. North, northeast, and east winds are very destructive to the honey-flow, and during the past season almost continued winds from these directions prevailed, together with a dry, harsh atmosphere. The best flow of honey is secured by a southwest wind, and a west wind is the next most favorable. A damp, warm, balmy atmosphere is essential to successful bee-culture.

A Living Mouse smothered in honey is a great delicacy in China, as appears from the following item in an exchange:

If you were a Chinese girl, remarked a Celestial nobleman belonging to the Chinese mission, and wanted to give some one a great delicacy, you would get two young baby mice, blind and unable to crawl, and place them before your guest alive on a plate. He would dip each living morsel in a dish of honey and envelop it in a sugary shroud before popping it into his mouth. The dying squeak of the poor little atom is the sauce piquante of this favorite dish in China.

Magnificent Increase.—Mr. John Kentch, Tioga, Pa., writes to *Gleanings* that he has obtained 278 bushels of Japanese buckwheat seed from 2 pounds of seed in two seasons. He says:

One year ago last spring I bought 2 pounds of Japanese buckwheat, which I sowed on July 5, 1887, from which I harvested 8 bushels and one peck of good buckwheat. On July 3 of this year, I sowed 4 bushels of it on 6½ acres of ground. It promised to be a big yield, but the frost of Sept. 6 and 7 cut it short. I cut it right away after the frost, and set it up. I threshed it Oct. 11, and got 278 bushels of good, clean buckwheat.

"Moisture and its relation to wintering bees," is the special subject matter of the last issue of the *Bee-Keepers' Review*. The editor sums it up thus:

The burden of the testimony is that moisture plays but an unimportant part in the wintering of bees, except as it relates to temperature. But little moisture is required to saturate cold air; that is, it will absorb but little moisture, the point when it will receive no more being soon reached. As the temperature rises, the absorbing capacity of the air increases. When air of a high temperature, at that of our bodies, or nearly that, is saturated, or nearly so, with moisture, the exhalations from the lungs and skin are taken up but slowly; we are oppressed, and say the weather is "muggy." This explains why we feel better on bright, clear days. Heating air increases its power of absorption, hence we enjoy a fire upon a damp day. If the air of a cellar is dry, it will be readily seen that the temperature may be allowed to go much lower. In other words, a cold, dry atmosphere, or a warm, damp one, may be about equal, so far as effects are concerned. We fear this point has not been sufficiently considered. We have had many reports of the successful wintering of bees at such and such a degree of temperature, but nothing is said as to the degree of saturation.

We wish bee-keepers would use a wet-bulb thermometer in their cellars; it would not be the work of half an hour to arrange one; then let the degree of saturation be given with that of the temperature, and we will have something approaching accuracy. We say "approaching accuracy," because the strength of the colonies and the manner in which they are protected, have a bearing. A populous, well-protected colony can warm up the inside of the hive, expelling the moisture and increasing the absorbing capacity of the enclosed air. Building a fire in a room on a damp day is the same in principle.

While it is true that moisture may be brought into the cellar with air from the outside, we do not think this is the case in the freezing cold of winter. Frozen air, if the expression is allowable, has a very low point of saturation. That is, it will hold but very little moisture; and when it is brought into the higher temperature of the cellar its capacity for absorption is greatly increased—it is ready to receive water instead of giving it out. When the outside air comes into a cellar and deposits moisture upon the objects therein, it is evident that the incoming air is warm and moisture laden—warmer than the cellar and its contents. Mold in bee-repositories is usually looked upon as something undesirable, and we will admit that its appearance is far from pleasant, but we must not forget that, in a certain sense, it is a plant—the child of warmth and moisture—and that the conditions necessary for its development may not be injurious to the bees—*may* be more beneficial than a condition under which mold does not develop, one of moisture and *cold*.

A very damp cellar ought to be warm enough for the development of mold. But the cellar need not be damp. It can be made both warm and dry. These matters of temperature and moisture are under our control. Either by fires, or by going into the earth, preferably the latter, we can secure the proper temperature; and by the use of lime to absorb the moisture, a dry atmosphere can be secured. Certainly, it is not much trouble to keep unslacked lime in the cellar. While it is evident that moisture in ordinary cellars is not injurious, provided the temperature is high enough, it is a great comfort to know that there is nothing to fear from a dry atmosphere; that we can indulge our fancy, if you choose to call it that, for dry, sweet-smelling, moldless cellars, and know that the results will at least be harmless.

First Premium.—In the report of premiums awarded at the Centennial Exposition at Columbus, O., a typographical error occurred, concerning which Dr. Mason writes as follows:

On page 759 is a big blunder, either of mine or the printer, and we are always ready to blame the printer. If it had been in regard to myself, I should have said nothing, but when an old man, that every one who knows him regards with esteem, and took so much pains to help make our State Centennial honey exhibit such a success, is the sufferer, then I want to do all I can to correct the mistake.

In the sixth paragraph, in mentioning the premiums awarded Mr. Aaron Goodrich, it says he "was awarded third premium on a display of comb honey and a display of beeswax." It should read **first premium** on both. He had a fine display of comb honey, and I never saw a nicer display of beeswax at a fair or exposition.

It was an oversight of the printer, and we gladly make the correction to do justice to our aged friend Goodrich, for it was a magnificent display, indeed.

A Portrait of Mr. George E. Hilton will look down over the Paris Exposition next year. The Fremont, Mich., *Indicator* for Nov. 15, 1888, contains the following item about it:

Among the many attractions at the Paris Exposition of 1889, will be an enlarged picture of Geo. E. Hilton's Red, White and Blue Apiary. The work is done by a new process, in the Department of Agriculture at Washington, and at Government expense. Also a crate of honey gathered from the famous willow herb (*Ephilobium angustifolum*). The picture will be exquisitely framed, and the honey exhibited in a black walnut case, after the pattern of George's shipping cases, and made by himself. At the close of the Exposition they will be placed in the Museum at Washington.

Mr. Hilton spent some money for engraving, but it has paid him well. His portrait, and his apiary, too, have been published in nearly all the bee-periodicals of the world. He is well advertised.

A Correspondent from British Columbia makes the following inquires about sweet clover:

1. Will sweet clover blossom when it is grazed with stock the same as white? 2. What quantity of seed is required per acre? 3. When is the best time to sow it?

We reply as follows: 1. As it does not bloom until the second season, it will do no harm if it is grazed by cattle during the first season.

2. Six pounds to the acre is about the right quantity to sow.

3. It can be sown at any time, even on the snow in winter. It is excellent for waste places, commons, etc.

At Rest.—Dr. C. C. Miller's mother died at his residence a few days ago, after an illness of nine months. It is a relief to know that her long illness is now over, and that she is released from her sufferings, even though it does sever the dearest of human ties—the most sacred of all earthly affections. Peace to her dust.

It is Refreshing to get a report stating that the past season was the best in twelve years. That is the interesting news given in the following from Mr. H. A. Schultz, of Clontarf, Ont. He says:

This has been a very good season for honey with me, in fact the best in my 12 years of bee-keeping. I am greatly pleased with my crop this year. A few more good seasons like the past one, and I think that I shall be able to say that my bees have paid me back the money I have expended for them, and on their account. To-day we are having a fall of snow, and I am moving my 45 colonies into the bee-house. The past three days were nice and warm, and the bees had a grand final flight before being put into winter quarters. This is the first time that I can put my bees away on full natural stores; in previous years I had to feed considerable sugar syrup.

A Key to the Families of Insects, by Noble M. Eberhart, B.S., Ph.D. This is the name of an 8-page pamphlet issued by the Popular Publishing Co., at Chicago Lawn, Ills. This Key is the only one of the kind published, and consequently of more value to entomologists than if it was only one of several. Although the matter does not occupy much space, from its nature it is readily seen that years have been spent in its preparation.

Please to get your Neighbor, who keeps bees, to also take the AMERICAN BEE JOURNAL. It is now SO CHEAP that no one can afford to do without it.

☞ The 23rd annual meeting of the Michigan State Bee-Keepers' Association will be held in the Council Room at Jackson, Mich., on Dec. 12 and 13, 1888. Greatly reduced rates have been secured at the Hurd House, also at the Commercial House (near the Michigan Central depot) at $1.50 and $1.00 per day. A programme is being prepared and excellent essays are already promised. Any bee-keeper having anything new and useful, and finding it impossible to be present, can send it by Express to Jackson, in care of the Secretary, who will place it on exhibition and return it as per orders. Please to come and bring your bee-keeping friends with you.

H. D. CUTTING, *Sec*

CLUBBING LIST.

We Club the *American Bee Journal* for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

	Price of both.	*Club*
The American Bee Journal	1 00	
and Gleanings in Bee-Culture	2 00	1 75
Bee-Keepers' Magazine	1 50	1 40
Bee-Keepers' Guide	1 50	1 40
Bee-Keepers' Review	1 50	1 40
The Apiculturist	1 75	1 65
Canadian Bee Journal	2 00	1 80
Canadian Honey Producer	1 40	1 30
The 8 above-named papers	5 65	5 00
and Cook's Manual	2 25	2 00
Bees and Honey (Newman)	2 00	1 75
Binder for Am. Bee Journal	1 60	1 50
Dzierzon's Bee-Book (cloth)	3 00	2 00
Root's A B C of Bee-Culture	2 25	2 10
Farmer's Account Book	4 00	2 20
Western World Guide	1 50	1 30
Heddon's book, "Success,"	1 50	1 40
A Year Among the Bees	1 75	1 50
Convention Hand-Book	1 50	1 30
Weekly Inter-Ocean	2 00	1 75
How to Propagate Fruit	1 50	1 25
History of National Society	1 50	1 25

QUERIES AND REPLIES.

Spacing Frames in the Brood-Nest.

Written for the American Bee Journal

Query 592.—1. What is the proper or best distance apart to space frames in the hive? I use the Van Deusen metal corners, and my hives take 8 frames spaced ⅛ an inch apart. 2. Would not 9 frames in the same space be better? 3. If so, why? If not, why not? The queen will only deposit eggs in cells 7-16 deep. I think that the Van Deusen corners are a little too wide, as the bees are apt to build the cells too deep for eggs, and fill them with honey, thus preventing the queen from depositing eggs in them.—S.

Seven-eighths inch top-bars are the usual width. I prefer to space brood-frames 1⅜ inches apart from center to center.—JAMES HEDDON.

1. I use 1½ inches from center to center of the frames. 2. I have no experience with the Van Deusen hive. —G. M. DOOLITTLE.

I have usually used frames 1½ inches from center to center. That satisfies me. I think that a slight variation does no harm.—A. J. COOK.

The distance from the center of one top-bar to the centre of the other should be nearly 1 7-16 inches.—J. P. H. BROWN.

Space your frames just 1 7-16 inches from center to center, and you will be about right for all practical purposes. —H. D. CUTTING.

From center to center brood-frames should be about 1⅜ inches apart. I have usually spaced them 1½, but that is wider than necessary.—M. MAHIN.

1. I space 1½ inches from center to center. I am not authority on questions 2 and 3.—J. M. HAMBAUGH.

1. Eight frames to the foot are what I generally use, but I have used nine. I prefer eight, as it gives more room for the bees, and they are more convenient to handle.—A. B. MASON.

1. One and three-eighths inches or a little less, from center to center. 2. That depends upon the size of your hive. Give each frame from 1¼ to 1⅜ inches from center to center.—R. L. TAYLOR.

As I do not use the metal corners spoken of, and therefore cannot appreciate your difficulty, and as you seem to have reasoned out the matter pretty well, I will not advise.—EUGENE SECOR.

In questions of this kind you should give dimensions of the hive, etc., as many do not know anything about the Van Deusen corners. Frames should be a little less than 1¼ inches from center to center; ten frames in a space of 14¼ inches is about right.—P. L. VIALLON.

1. One and a half inches from center to center. 2. I think not. 3. The queen always has the comb well stocked with eggs and brood before the honey-flow causes the bees to enlarge the combs.—MRS. L. HARRISON.

I use 1⅜ inches from center to center space of brood-combs. As you do not give the size of your hives, I am unable to answer your other questions. —C. H. DIBBERN.

1. I prefer 1⅜ inches for my brood-combs. 2. I would think so. 3. Because the combs are kept straight by reason of there being no surplus room to bulge them out of shape. After looking more carefully at your questions, you leave me in the dark when you say that your frames are ⅛ inch apart. The proper way is to measure from center to center of the frames.—G. W. DEMAREE.

1. I am not sure. Perhaps 1⅜ inches from center to center. 2. I am inclined to think it would. 3. Because with only 8 frames the space is 1½ inches, which, I think, is too much. I take it that your top-bars are one inch wide. If not, that changes the whole affair.—C. C. MILLER.

1. Usually 1½ inches from center to center. 2. I think nearer spacing would be better. 3. The reasons, therefor, would require more space than can be given here—in fact they would form the text or basis of a long article.—J. E. POND.

1. Three-eights of an inch; in other words, just the width of your fore-finger. 2. Yes. 3. Because the ⅛ inch is too wide, and the additional frame would decrease the distance. Bees are quite to liable to build comb in spaces any larger than ⅜ of an inch.—WILL M. BARNUM.

1. One and a half inches from center to center. 2. No. 3. Because your combs would be too crowded, and would be gnawed down by the bees wherever there would be too little room. Also, because less bees can cluster between the combs, and they do not keep up the heat so well, etc.—DADANT & SON.

Eight frames to the foot for winter, and nine frames to the foot for summer. Frames closely spaced are more suitable for brood, and less suitable for storage, because of the thinness of the combs; and there is less spare room also when closely spaced than in the old way. This close spacing, as a principle, is known as "the J. E. Pond method," and is quite valuable—J. M. SHUCK.

1. About 1⅜ inches from center to centre is the best distance to space brood-frames, but some use them wider apart, and others even narrower, varying all the way from 1¼ to 1½ inches. Those who use "Van Deusen metal corners" for frames are best qualified to criticise them. Perhaps you are right in your deductions.—THE EDITOR.

Planting Trees for Honey and as Wind-Breaks.

Written for the American Bee Journal

Query 593.—I have 4 or 5 acres that I wish to plant to forest trees. 1. What variety (or varieties) would be the most valuable and hardy? 2. Will the basswood (or linden) grow from cuttings? or what time should the seed be planted, or will they grow from the seed? I want to plant most of the trees next spring, and would like to plant trees that would produce honey as well as make a wind-break and shade.—Iowa.

1. Basswood. Plant small trees.—JAMES HEDDON.

I would recommend basswood. It is best to propagate it from the seed.—J. P. H. BROWN.

I know nothing at all, practically, of the matter.—J. E. POND.

I have had no experience in this line.—H. D. CUTTING.

This can be better answered by some one in your State.—P. L. VIALLON.

Black locust and honey locust, or linden and box-elder.—MRS. L. HARRISON.

I should prefer basswood, and would get the young trees at some nursery. I think that cuttings of basswood would grow.—G. M. DOOLITTLE.

Linden, and tulip if they do well, from seeds. Plant in the fall or spring. The trees grow rapidly, and are beautiful.—A. J. COOK.

1. Linden, if you want honey. 2. We need light upon raising linden from seed. You would probably better buy young trees. I do not believe that they will grow from cuttings in open ground.—C. C. MILLER.

I would plant the linden, and a few soft maples. I am not authority on how to get the plants started.—J. M. HAMBAUGH.

1. I would plant black walnut. 2. I do not know, never having tried it. Plant the seed in the fall. For a shade and honey-tree plant basswood (or linden).—A. B. MASON.

If I were to plant for the value of the timber, I should plant black walnut; for honey, basswood is the best for your State. I do not know whether they will grow from cuttings, but they will grow from seed. I do not know the best time or manner of planting.—C. H. DIBBERN.

1. Where fence-posts are used, black locust is very valuable. It grows very rapidly, and lasts equal to red cedar.

2. Basswood seed will grow. Plant as soon as gathered, and keep the ground moist with a light covering of leaves. Plant seeds in nursery rows, and transplant when large enough. Locust, basswood and soft maple would answer your purpose.—R. L. TAYLOR.

Honey-locust (*Gleditschia triacanthus*) yields an abundant flow of honey, and can be propagated from the seed. Also poplar (sometimes called tulip-tree) is a good honey-yielder. But for general use, the basswood cannot be beat. The best way would be to get small trees from the woods. Cuttings would be far preferable to seed.—WILL M. BARNUM.

1. Basswood, locust, soft maple, and perhaps tulip trees. 2. No! Take roots from places where the trees have been grubbed out and have sprouted up again. So far as our experience goes not one seed of basswood in twenty will grow. For wind-breaks, etc., all things considered, we would use first, maple; second, locust; and third, basswood,—DADANT & SON.

1. For your purpose I would recommend basswood, and next to that, the *Linodendron tulipifera*, commonly called in this country "poplar." 2. Basswood can be grown from cuttings, but I think that success could only be secured on a large scale by using a hot-house. 3. They will grow from the seed, and the seed should be planted in the late summer or early fall.—M. MAHIN.

1. Iowa is a large State—200 miles across north and south. What would do well in the southern part might not in the northern—instance catalpa. For an ornamental tree few excel linden, but in planting I would not confine myself to one variety. While you like honey, your posterity may like walnuts and butternuts. The lumber from the latter will be four times as valuable. Linden is best raised from the seed gathered in fall. They can be bought cheaply from some nurseries. This question needs more space.—EUGENE SECOR.

Plant the beautiful American linden. I would not bother with seeds or cuttings, but go to the forest and get the young trees. They transplant readily, but the young trees must be protected from stock. Nearly all four-footed animals like to browse on the mucilaginous twigs and bark, and I have even seen bipeds of the *genus homo* doing the same.—J. M. SHUCK.

Your locality must be taken into consideration when deciding your questions. In my locality I would plant the black locust, as it is an extra honey-producer, a rapid grower, and is valuable for fence-posts. A five-acre lot worth $40 per acre here, if planted in black locust, in my locality, would be worth $250 per acre in 15 years from the time it was planted. Perhaps the linden would prosper best in your locality. It will not pay to raise forest trees from cuttings.—G. W. DEMAREE.

If you want honey, transplant young linden trees (basswood) in the spring, from the woods. They grow readily if sufficient moisture is provided. To grow from the seed is less satisfactory. The poplar (or tulip), black and honey locusts, soft maples, etc., are hardy, easily grown, and are very desirable for shade, wind-breaks, and the honey they produce.—THE EDITOR.

CORRESPONDENCE.

THANKSGIVING.

Written for St. Nicholas Magazine
BY GRACE WINTHROP.

The sunflowers in the garden
  Are bending limp and low.
Two cornstalks, brown and withered,
  Stand rustling in a row.
"We were so fine," they murmured,
  "A little while ago!"

The sky is gray and gloom
  Without the sunshine's glow.
There is no smiling anywhere
  Unless—Oh, gladsome show!
Twelve plump and golden pumpkins
  All beaming in a row!

They say, "Why so despairing?
  We're always here, you know,
At this unpleasant season
  Expressly sent to show
The need of glad Thanksgiving,
  In spite of frost and snow."

ITALIAN BEES.

Putting on Sections—Symptoms of Foul Brood.

Written for the American Bee Journal
BY G. M. DOOLITTLE.

A subscriber to the AMERICAN BEE JOURNAL wishes me to give a description of the Italian bee. While this would seem almost unnecessary at this late day, yet I will try to comply with the request in a sort of a general way.

This bee belongs to one of the yellow varieties, to which also belong the Cyprian and Syrian. The Italians are very quiet and gentle, in their purity, while the other two varieties named are very cross and vindictive. Italians were imported to this country about 1860, while the other two were not brought to our shores until about 1880. So far nearly all apiarists agree in placing the Italian bee at the head of all others, both as to ease of manipulation, beauty, and honey-gathering qualities.

As comb-builders the Italians are not quite as good as the black or German bee, neither do they use as much wax in capping their surplus honey, which causes it to have a little darker, or watery, appearance. They cling very tenaciously to their combs, while the black bees often fall off or run about in a frightened way, making it a nuisance to handle them, especially if a little too much smoke is used. The tenacity of the Italians makes the handling of the hives and combs very pleasant, but when we wish to get them off the combs for extracting the honey, or for any purpose, it is quite a job.

However, the main point of superiority of the Italian bee is in its honey-gathering qualities. If there is any honey to be had, they are away to the fields after it, and will toil incessantly all day for a very little, while the black bees will not work at all unless honey can be gathered quite freely. Italian bees will labor faithfully all day long for only "pennies," while the German bee must have the "dollars" or it will not work. To illustrate:

In the spring of 1872 the writer had 15 colonies of black bees, and 3 Italian colonies. As an experiment, a 14-quart pail full of maple sap was placed in shallow dishes after adding about 2 pounds of sugar, so as to make a very thin sweet. With honey, the bees were started to work near this sap, and as long as the honey lasted they came in about the proportion named above—15 of the dark, and 3 of the yellow bees. As soon as the honey was gone, they took to the sap, but in a few minutes the black bees began to stop coming, so that in an hour none but Italian bees were carrying the thin sweet. These bees worked until they carried all the sap home, and had it evaporated down to the consistency of honey, while the black bees thought it not worthy of their notice.

When to Put on Sections.

From the various letters which I get, asking when sections should be put on the hives, it would seem that there was a lack of knowledge on the part of some along this line.

In the forepart of the season a little care is required, for if put on too early they will greatly retard brood-rearing, owing to the cool nights which are liable to occur at the time, during which the bees are obliged to economize heat as much as possible. At this season of the year it is not best to put them on until the hive is filled

with bees and brood, so that they can take possession of the sections at once, and if cold nights do come, the bees will crowd down into the hive below, so as to protect the brood.

Again, there is no use of putting on sections until the bees are getting honey, for they not only tend to discourage brood-rearing, but the bees, having nothing else to do, will often cut down the foundation starters, and plaster propolis or bee-glue over them so as to make the labor of the apiarist much more than it otherwise would be.

The proper time to put on sections is when the hive is filled with bees and brood, and the bees are getting honey enough so that little bits of comb are being built about the tops of the frames. At such times the cells of comb will be lengthened along the tops of the frames, which is so pleasing to the eyes of the experienced bee-keeper, thus showing that the bees are getting honey, and are ready for the surplus department.

Symptoms and Cure of Foul Brood.

Another subscriber wishes to know the symptoms and cure of foul brood. When a colony has this dreaded disease, a few of the larvæ die soon after the bees seal the cells containing them. The cappings to the cells soon have a sunken appearance, with a pin-hole in the centre of each. Upon opening the cells the larvæ is found stretched at full length in the cells, and have a brown appearance, while all healthy larvæ or pupæ are white. If touched, this dead brood is of a salvy, ropy nature, and gives off an offensive smell.

From the first few cells the disease spreads rapidly until the combs become a putrifying mass, generally during the first season, and nearly always during the second, which stench at this stage, if allowed to get so far, can be smelled a rod or two from the hive. A few of the larvæ mature into bees, the population of the hive decreases until it becomes an easy prey to robbers, when the honey is taken off by these robber bees, only to carry the seeds of the malady to the robbers' hive, for the disease to spread through the honey, and all else coming in contact with it.

The cure is to drive out all of the bees from the affected hive, and keep them shut up in an empty box until they are nearly starved, so that they will have digested all of the diseased honey. They should then be hived and fed in a new, clean hive, when they are clear from the disease. If in the honey season, a swarm issues from a foul-broody hive, it is not necessary to put them through the starving process; simply hive them in an entirely empty hive, the same as you would a healthy swarm, and as far as my experience goes, they will always be healthy thereafter, unless they contract it again by getting diseased honey from some other hive.

Great care should be taken that no bees get at the contents of the old hive before the combs are rendered into wax, and the honey and hive scalded. Other cures have been recommended, but most of them are ineffectual, except in the hands of an expert.

Borodino, N. Y.

ODOR OR COLOR.

Which is it that Attracts the Bees to the Flower?

Written for the American Bee Journal

BY MRS. MAHALA B. CHADDOCK.

Prof. Cook asks how I know that color is no guide to bees. I answer, I know it because I am a reasoning being. If I were an insect I should know it by instinct. I *know* that bees are guided by odor, and I think that I can prove it, even to Prof. Cook's scientific mind.

Most of the nectar-bearing plants that I am acquainted with are inconspicuous in color, but strong in odor. Is there anything bright or showy in a field of white clover? Anybody with eyes in his head must answer "No." Do not the bees always find the white clover blossoms? A thousand voices answer "Yes." Well, then, color does not attract bees to white clover, but odor does. It seems to me that this is incontrovertible.

The blossoms of the linden are yellow, but there is a sort of white membrane near the clusters of flowers that makes many people think that the blossoms are white. A silver-leafed maple appears, when the wind is stirring, as much like a flowering tree as the linden does when full of bloom. Can the bees see the blossoms on the linden and pick them out from other forest trees? No, they cannot! They smell them, and go for them. Can any body doubt this? Can Prof. Cook doubt it?

Then there are the raspberries, the catnip, the sweet clover, and groundivy, all inconspicuous flowers, but flowers that are never neglected by the bees when they contain nectar. And is there on all the earth a more insignificant flower than the smart-weed? It grows mostly in corn-fields, and never reaches to the tops of the stalks; the flowers are a pale pink in color, and so small that at any considerable distance up in the air they must be practically invisible. Are the smart-weeds ever neglected by the bees? Never. Why, if it were possible to stretch a curtain over the entire field, and nail it to the fence all around, the bees would go in through the rails and gather the nectar all the same. Can Prof. Cook doubt this?

I think that I have proved my statement, but I will prove it in another way. When you feed bees out-of-doors, put some honey in a plate of rye flower, for instance. Is it a yellow color, or *any* color, that attracts the bees to it? The rye flower is a whitish gray—one of the most inconspicuous colors—but Prof. Cook knows that the bees will go to it. How can they find it except by the odor?

When old bee-hunters go out to "line" bees, what do they take to attract the bees—some bright-colored yellow flowers fastened in a bouquet on a pole? Not at all; they take some foul smelling stuff in a vessel, and the bees come to it because they smell it. Can any one dispute this point? I think not.

If the slops from the bed-rooms are emptied on the grass at certain seasons of the year, the bees will work on that spot. There are no flowers of any kind, only green grass and *odor*. Can this be disputed? When bees go to cess-pools, do they go for bright colors? Everybody knows better—they go because they smell something that they want. There can be no question of color about it.

I think that I have covered every point, so far. Prof. Cook says: "It is almost the universal opinion of scientists, that the color of flowers was developed especially to attract insects; this of course for the flowers' good." If this is so, then it only goes to show that scientists are almost universally wrong. Bees visit flowers for the honey and pollen they contain, not for the good of the flowers. To believe otherwise, is witchcraft. A bee can know no more of what is good for flowers, than a hog knows of the prices of pork in a daily newspaper.

If color is given to flowers to attract insects, why do not bees work on flowers that have no nectar or pollen? Why do not bees work on zinnias and dahlias, and peonys? Nothing could be much brighter, but they contain no honey or pollen, and the bees pass them by. So if Nature gave color to flowers to insure their fertilization, she made a big mistake. She would better have endowed all her flowers with nectar or pollen. If insects do by chance alight on a brilliantly colored flower containing no honey or pollen, they do not stay; they do not go in and out, and handle the stamens, as it is necessary they should do, in order to fertilize the flowers.

The Professor asks how I know that insects do not reason. I know it in

this way: All reasoning animals study out ways to better their surroundings. This is the *insignia royal* of reason. Well, bees do just the same things over and over that they did thousands of years ago. They live in hollow trees, and hang suspended on limbs now, when in a wild state, just as they did then; and build in the crevices of rocks just as they did in Bible times. Why, if bees had been endowed with reason, there would be no free man on the earth to-day. Armed as they are with a deadly weapon—a weapon that will kill a horse or a man as surely as a bullett—they would be marching us around with a guard of bees on every side, and telling up *pointedly what* to do, and *how* to do it—to improve *their* houses, to train up *their* young, and to prepare *their* dainty dinners.

Vermont, Ills.

BEE LIFE.

The Length of the Term of Bee Life Considered.

Written for the Journal of Horticulture

BY A LANARKSHIRE BEE-KEEPER.

Notwithstanding all that has been written upon the natural term of bee life, there is still much misconception regarding the limit. From the fact that many articles have been written on preserving the life of bees, is proof that their management is by many but imperfectly understood, and that many bees die at an early age through ignorance on the part of the owner. There is no time throughout the whole year that the apiarist is justified in pursuing a course that is likely to shorten bee life. Where profit is expected it should be the aim at all times of the bee-master to prolong it.

Although care to prolong bee life is necessary at all times, yet during autumn a little extra attention is absolutely necessary before we can reasonably expect our favorites to tide over the winter months successfully, and obviate the untimely deaths we read so much about. That bee life can both be prolonged or cut short there is no doubt, and the bee-keeper has the control of that to a great extent, as can be witnessed by comparing results under different managements.

I have expressed my views strongly as to what constitutes the best preserving hive, the first principle in apiculture. I have also shown that the short term of bee life, as set down by modern writers, is misleading; in short, the six-weeks theory cannot be supported by any evidence. However desirable the youthful element may be in the hive at certain seasons, it is positively injurious at others. It is a fact well known that bees, on or about the fifth day of their existence, if the weather is warm, fly out and void their excreta, which, if delayed beyond a reasonable time, they become restless and cold, communicating the restlessness to the adult bees; and the young ones, unable to fly, either leave the hive to die outside, or are chilled to death inside. Young bees cannot endure the same length of confinement, if they have never had an airing, as adult bees, and are often the direct cause of the entire loss of the colony that bred them.

Late feeding is a mistake, and many a bad result has arisen therefrom. Late breeding we cannot always prevent, but it should not be encouraged. It has always been our object to be in possession of bees that neither require feeding nor coddling. Some years since, and for years in succession, a cotemporary advised feeding in October, and we know something of the evil that beset those who took that ill-timed advice.

Bees, as a rule, cease breeding with the decline of the honey season, which usually occurs about the end of August, except in the case of those having young fertile queens, which, unless fed, will not breed beyond the autumnal equinox, but will sometimes begin again soon after the shortest day. When this is the case, and a mild February follows, there will be a chance for the young and tender bees to get an airing. Then all may go well; but should the weather be unfavorable and protracted, so as to prevent the flight of the young bees, the colony may succumb to the influence of the evil. But, happily, early breeding is not so fatal or injurious to bees as late breeding.

I have for some time past been paying particular attention to colonies with late-bred bees, not for the purpose of getting information, but to be enabled to give that to others from accurate observations. Since Nov. 10, the last day bees carried pollen for this year, I have collected all the dead bees from several hives, having taken the precaution that none should be carried off by the birds, by netting the front of the hive. I collected the ejected dead, and found, as I fully expected, not more than 10 per cent. of adult bees out of more than ten thousand. These I laid down near a hive, and in less than an hour the sparrows and titmice had carried every one away. My reason for mentioning the alacrity the bees displayed is to impress bee-keepers that, though their hives may show signs of dead bees, they may be actually dwindling rapidly through some autumnal mismanagement.

The foregoing will, perhaps, impress the beginner with the evils of late feeding and breeding, and convey to him the cause of dwindling. This is sometimes aggravated by uncalled-for molestations, and a superabundance of cloth coverings, which often cause internal damp and disease in the bees. Thus, by excess, they aggravate evils that sensible bee-keepers would obviate by using, in moderation, the proper quantity of a suitable material, which helps greatly to prolong the life of bees.

PROTECTION.

Legislation for the Protection of the Rights of Bee-Keepers.

Written for the American Bee Journal

BY DR. C. C. MILLER.

I have been sometimes amused, sometimes unmoved, and sometimes pained at the inevitable misconstruction and misrepresentation that generally occur whenever my views as to legislation for bee-keepers are mentioned. Do I express myself so indistinctly on this subject that I cannot be understood? Quite frequently the misrepresentation is in attributing to me views that I never held. I clip the following from the *Western Plowman:*

For some years a discussion has been going on in the bee-papers as to bee-keepers buying the "honey rights" of their respective districts, to the exclusion of all others, by paying a small rent to the owners of the land on which the bees are supposed to forage. Dr. C. C. Miller, of Marengo, Ills., is at the head of such a proposition, and seriously proposes to have a law enacted to that effect. Lately some others have come to his assistance, and they seem to seriously think that some such law should be passed, and would be of practical advantage to both bee-keepers and land owners. How such a question can be seriously considered, and why it should be urged by bee-keepers is astonishing. Such a law ought to be entitled, "An act for the extermination of bee-keeping," as that would be the inevitable result if it could be enforced. Bee-keepers have certainly expenses, and difficulties enough now, without adding new burdens, especially if self-imposed. But let us look at the justice of the proposition.

Bees have been kept for thousands of years, and their rights to go and gather the nectar from forests and fields have never been questioned. Such rights have never been deeded in fee simple to any land owner, and consequently they do not own them, and have nothing to rent or sell. But even admitting that they had a right to the honey produced, and which would go to loss but for the bee-keeper, then in order to protect such property they would be compelled to build a legal fence which would of course be such a fence as no well-behaved bee could get over. That this cannot be done is very evident. Then such a proposition is contrary to public policy. The bee-keeping industry interest is now worth more than $25,000 annually. Many a poor man, and woman too, are now able to

make a good living in this pursuit, for themselves and families, without injuring any one, that would otherwise, perhaps, become charges on the community. Then, too, would not such a law be a step in the direction of trusts, favoring a few at the expense of the many? But it is almost nonsense to talk of this matter, only to show its absurdity. It will be many a day before any such law will be passed in this country.

The above is from the pen of Mr. C. H. Dibbern, for whom I have much respect as conducting a department in the *Western Plowman*, of Moline, characterized, so far as I have had opportunity to judge, by fairness and good sense. Mr. Dibbern and I have had no bitter quarrel, and so far as I know, nothing but kindly feelings exist between us, and why he should misrepresent my views, and hold me up to the ridicule of his readers, is something that I can understand no more than I can understand the many previous cases of misrepresentation.

Whether the proposition to buy "the 'home rights' of their respective districts by paying a small rent," etc., be a wise proposition or not, I will not stop to discuss, but certainly I have no recollection of advocating such a proposition, or proposing "to have a law enacted to that effect." Indeed I have said very little as to the particular means of attaining the end, the only point I have insisted upon being that there should be some way in which a bee-keeper might be secure from interference in a certain territory, without specifying how such a security should be obtained, or whether it should be secured for one colony or a thousand.

Mr. Dibbern says, "Lately some others have come to his assistance," and I am glad to believe that their number is not small, and I feel confident that when Mr. Dibbern gives the matter the thought it deserves, he will come to my way of thinking.

Mr. D. says: "Bees have been kept for thousands of years, and their rights to go, and gather the nectar from forests and fields have never been questioned." Softly! Has Mr. D. forgotten the cases of S. I. Freeborn, of Ithaca, Wis., Z. A. Clark, of Arkadelphia, Ark., and others? On account of the absence of laws for the protection of bee-keepers, more than one has been obliged to give up his bees or move.

Has Bro. Dibbern forgotten the existence of the Bee-Keepers' Union, born of the necessity for organized effort to withstand the assaults of ignorance and malice, just because proper legislation is lacking? What would be said of a "Farmers' Union" combined to resist the attempts that might be made to drive a farmer from the cultivation of his land? No such thing is needed, for the law is sufficient to protect each farmer on his territory, be that a rod or a mile. Something in the same line is needed that the bee-keeper may be protected, whether he may have one colony or a hundred.

As the matter now stands, Mr. Dibbern may awaken some fine morning to find that his apiary, "the white, blue, red and yellow hives among the trees," upon which he looks so lovingly, may no longer be continued, on account of legislation from a lower power that was made possible by the apathy of bee-keepers in failing to secure from the State the legislation that might be had for the asking. Or he may find, as others have done, that within a few rods of his, another apiary may be planted, thus spoiling the chances for both; and then Mr. D. might think it a very fine thing if he could stand on the same footing as a farmer, in possession of his territory.

The fact that "such a fence as no well-behaved bee could get over" cannot be built, cuts no figure in the case. Fences are not built to confine fish within certain limits, and yet fishing limits are defined within which no outsider dare intrude.

Does Mr. D. think that the laws protecting farmers ought to be entitled "An act to exterminate farming?" Does he think such laws "a step in the direction of trusts?" Would it be an improvement to throw all lands open in common that each man could settle down anywhere at his own sweet will?

Now please remember, friend Dibbern, I ask nothing more for the bee-keeper than for the farmer, and I have no more desire to drive out of the business "many a poor man and woman who are now able to make a good living in this pursuit," than I have to drive them out of farming.

Marengo, Ills.

ASIATIC BEES.

Where the Caucasian Bees Came From.

Written for the American Bee Journal

BY J. W. TEFFT.

It will be seen at the extreme eastern end of the Black Sea in Central Asia, there stretches eastward the range of Causasus mountains to the Caspian Sea. The great Russian railroad now building into the heart of Asia is at last a fact, and travelers can now go from St. Petersburg almost to the boundary line of the Chinese Empire in twelve days. From St. Petersburg the new line runs through Moscow, Womnesh, Rostoo and Valkavas; here the route is barred by the Caucasus range, over which the line is not yet completed, and one has to take a camel caravan to travel 18 hours over a pass of 8,000 feet high, 2,000 feet higher than St. Gothard.

With scenery twice as wild as that of Switzerland, the Caucasus will be a great summer resort in the near future. Over the pass we come to the rich valley of the Oxus, the Mississippi of Central Asia, now opened up, having no outlet save by caravan. The resources of this territory are all kinds of minerals and agricultural, and all undeveloped. The effect on civilization, of the new railroad line, can better be imagined than described. Considering the fact, the great mechanical advances, and the higher civilization of the nineteenth century will now be carried into this barbaric Asia. Its effect upon school geographies is not even to be surmized.

In referring to Webster, he defines Caucasian thus: "Any one belonging to the Indo-European race, and the white races originating near Mount Caucasus." These mountains stretch from longitude 40° to 50° east, and latitude 46° to 50° north, about the same latitude as the State of Maine, 47°, being several degrees north of Syria, Cyprus or Italy, the homes of the Syrian, Cyprian and Italian bees. Thus it will be seen that the Caucasian bees came from a cold climate.

Peculiarities of the Caucasian Bees.

Now whatever may be the individual or class merit of the Caucasian bees, they take the lead in all points save one, and that is swarming. They are remarkably gentle, seldom stinging, yet they can sting when abused.

In manipulation I never use smoke, as that arouses them to anger. The only time I use smoke is when closing up the hive, to drive them away to prevent bruising.

These bees cling to the combs firmly when the frames of combs are handled. As honey gatherers they are as good as the best. Their cappings are equal to that of the blacks, being very white and thick. The bee-glue or propolis is not half as sticky as that of the blacks or Italians. They gather immense quantities of pollen. The queens are remarkably prolific, and colonies swarm once a week, if left to their own management.

They build more queen-cells than any other race of bees. The brace-combs seem to be made of dark wax, a kind of mud color, which is objectionable when cappings are stuck to the separators. They are extra hardy, and stand our cold, bleak winters splendidly.

Their color is of a dark copper hue, or fine orange like—not so light a

color nor as handsome to my eye as the Cyprians, but tending towards that splendid species. They are large bees, yet long and slim. Their wings are long, and will carry a big load. They work when Cyprians and blacks are idle, and are out earlier in the morning, and fly later in the evening. They gathered honey right along during the drouth of 1886 and 1887, when the blacks, Cyprians and Italians gathered none, but used up all unsealed honey in the sections, and then nearly starved.

They not only stand the heat, dryness and cold better, but against robbers, insects, moth-millers and fungus they have no equal; and when properly understood and managed, they will gather as much honey as any bees, but they require another system of management.

They are amazingly interesting as a race; not for their superior hardiness against cold and drouth, but for the fact that they introduce a distinctly new strain of blood, one which by crossing with those we already have, is likely to give us very superior bees.

The four years that I have been experimenting with the Caucasian bees, I have learned something. The first swarm I was at my wit's end to understand rightly. At that time I would have willingly given $50 had I never seen them. They gave me much trouble by their continuous swarming, which was decidedly disagreeable and annoying. I transferred them to reversible frames, and with a determination to conquer, and also to study their habits and requirements, and by domestication to civilize them so that they would stay at home, I soon found the prime cause to be in the queen, resulting from her extraordinary prolificness. The minor cause was pollen.

The queens want more room than any race of bees that I ever owned. The peculiar device I have adopted in my management of them was that I gave the queens more room without inserting extra combs, and with the help of the device I solved the puzzle, and now I have them under control.

Securing Hardiness in Bees.

For 31 years I have been trying in vain to discover one type of bees that I could rear successfully in northern central New York; and one of the most discouraging things to contend with, has been the difficult character of hardiness. Indeed, I think if it were not for this unsurmountable difficulty, we have bees hardy enough to successfully breed much further north. Without hardy bees there cannot be a great success in honey-production; and to my thinking, it is this weakness which has prevented my succeeding with the almost hardy bees, such as the Cyprian, Italian and blacks, and their crosses. They are all fine honey-gatherers, but they fail during our severe winters.

It seems reasonable, and it may be of some wisdom, that with the Cyperian bee from the South, and the Caucasian bee from the North (or any other first-class race of bees)—if we could cross them with this most hardy bee, and could rear them successfully, we would have the "American bee;" and by crossing and judicious selection, we could retain the quiet, gentle disposition and hardiness of the Caucasian, and thus remedy the terror—stings.

A cross of the Cyprians, and this the hardiest and gentlest of all bees, might confer upon the former those better qualities, gentleness and hardiness, which are generally needed; and by commingling the several different natures, we will have an equisite beauty—the American honey-bee, not now found in any one type.

But our triumph will not then be completed. We must, and can, produce an American bee vastly superior to any now known. There is no question of the certainty of such results. We want first-class bees, and in order to get them, we must have *first-class parentage.*

From the fact that all bees are more or less mongrels of many degrees of crossing, and various relatives will crop out in a multitude of disappointments, yet our past success is a guaranty for the future, that out of many, some will be good.

I trust that some enthusiastic apiarist may be sufficiently interested in the matter to make these crosses. This can only be done by those who are so situated as to be able to breed all kinds, which we of the bleak, cold North are unable to do.

Collamer, N. Y.

COLORADO.

Report of the Colorado State Bee-Keepers' Society.

Written for the Colarado Farmer

BY J. M. CLARK.

An adjourned meeting of the Colorado State Bee-Keepers' Association met in Denver, at the Chamber of Commerce, at 10:30 a.m., on Nov. 13, 1888, with President Milleson in the chair.

Secretary Clark read the minutes of the last meeting, which were approved.

Chairman Rhodes, of the committee on foul brood, desired to confer with the other members of the committee, and report in the afternoon.

Secretary Clark reported that he had received communications from Delta and Montrose, from parties desiring to form an association auxiliary to the State society. He also read a letter from C. E. Carroll, of Liberty, Rio Grande county, stating that he had had several colonies in the San Luis valley, but the experiment had not been a success.

President Milleson urged that the Society be incorporated, so that they could get their reports printed in connection with the Horticultural Society report, etc. V. De Vinney agreed with the President, and moved that the Secretary be authorized to take immediate steps towards incorporation under the State laws, which was carried.

Foul Brood and its Cure.

V. De Vinney thought that for quite awhile his bees had no foul brood. He was appointed executor for an estate, and brought the bees (which had originally come from the East) to his apiary three years ago. He did not understand foul brood then. He found white spots and a slight odor, but not such as books had led him to believe. His own bees had robbed them as they grew feeble. Sixty colonies got this foul brood. Bee-Keepers should not wait until the combs get bad, but as soon as they find white spots and a slight odor, they should look out. He cut out the bad places and washed the frames with salicylic acid as the bee-books direct. He saved some, as it looked good, but gained nothing, as much afterward proved bad, and other foul brood was placed where he had cut it out. He had been over five years in getting this foul brood, so he did not think that it was as bad in Colorado as elsewhere.

Mr. De Vinney's belief is that this is nothing but a mold or mildew, no worse than other mildew, and if cut out early no harm would result. Where he used salicylic acid last spring he had found an improvement. It is generally said that when the comb is flattened, it is an evidence of foul brood. This is not true, for it may be even. The depression is caused by bees pressing against it in warm weather. He saw such depressed combs, took them out and examined them under a magnifying glass, when he saw them move, showing that there was life.

Bees will store honey when there is foul brood. To tell if clear comb is affected with foul brood, tip it to an angle of 90°, when you see the "mummy." Do not look at them flat, as they will appear all right, since the bees will clean them out when they can, but the "mummy" part is too sticky.

Mr. Davis—To what extent has foul brood been scattered?

Mr. Knight—My bees had it in Littleton.

Mr. Devinney—The bees had it in Morrison, but none up near Central City. It is in North Denver and Ralston creek.

Thos. Crisman lives on the upper end of the Ralston, and had heard of none west of Arvada.

J. W. Bacon said that there was none in the neighborhood of Longmont.

Mr. Hurlburt feared that many bees had the foul brood, as it was in the unsealed as well as the sealed honey, although the bee-books taught differently.

Mr. De Vinney corroborated Mr. Hurlburt's statement, as did also Rev. R. H. Rhodes.

Prof. Cheshire's book on foul brood was highly endorsed.

Mr. De Vinney said that science never discovered a gold mine, but it could tabulate experience. He had read much, but stated facts regardless of reading. As a big fire will destroy the whole earth while a little will not, so a little mildew amounts to little, but much will ruin.

Mr. Lohf had foul brood introduced into his apiary through some old comb. As soon as he found the punctures, he read bee-books, and put all the bees into an empty hive, and smoked the hive with sulphur. He used sulphur to a great extent when in the nursery business in Missouri. It destroys all fungus. It kills fungus also in the human system. He gave the bees new combs, and that was the last he saw of it.

Mrs. Graves, of Clear creek, found a great deal of foul brood. Mrs. Rhodes advised her to get medicine which she gave in syrup, and some queens were now laying, and they are thrifty.

Mr. Rhodes said that he had followed strictly the teachings of Prof. Cheshire's book, and the bees are now so lively that they act like bees in the spring.

Mrs. Graves said that she poured this medicated syrup over the broken combs. She used only a very little of the best of the poor comb in feeding.

Mrs. Rhodes' bees had had the foul brood all summer. Now she has some strong colonies, but has taken out 150 frames with foul brood. Mr. Rhodes dug a big hole in which she buried the frames and honey. She intends to experiment in feeding the best of the frames of honey to the bees.

Mrs. Everett had not found foul brood among her bees, which are lively, and come out each fine day. They have averaged 95 pounds per colony, and 5 swarms.

Mrs. Bacon said that her bees had averaged 150 pounds to the hive in extracting, but only 50 pounds of comb honey. This is not fair, as the bees were weak.

After a little discussion several new members joined, and the convention adjourned until 1:30 p.m., when Mr. Rhodes, of the committee on foul brood, consisting of H. Knight, Wm. Davis and J. M. Clark, with himself, made a report, showing that the disease was spreading very rapidly, that it was clearly defined, and they besought all Colorado bee-keepers to aid them in suppressing it; urged the appointment of a committee to petition the Legislature to pass a protective law, and to see that it is enforced. They recommended Cheshire's work on foul brood, and requested the members to forward to the Secretary all information pertaining to the subject.

The report was considered in parts, and with a few slight verbal changes, the entire report was adopted.

"At what season is the best honey gathered?"

H. Knight—The first about June.

Secretary Clark agreed that this was so, whether gathered from alfalfa or other flowers. Early honey has a white comb, as well as a better flavor.

Mr. Carlzen found that early honey is less gummy.

Secretary Clark said early honey would keep the best.

Mrs. Rhodes said that some tastes preferred the late honey.

Mr. Rhodes said that a Pennsylvanian, accustomed to buckwheat honey, would think our worst honey better than his best.

Secretary Clark thought that late flowers were yellow, and those of spring, white.

Mr. Knight wanted to know why late honey always granulates. Mr. Rhodes said that it was a question of locality; his did in the spring.

Secretary Clark said that alfalfa honey would candy, also rosin-weed honey, when extracted.

Mr. De Vinney said that raspberries would be in bloom about June 5, before alfalfa. His bees worked on willow, and he wanted to know about the quality of the honey. Answer—Mr. Root gives it as a honey-plant.

Mr. Rhodes offered the following resolution which was carried unanimously by the convention:

Resolved, That a committee of three be appointed whose duty it shall be to search out fraudulent honey, and dealers in the same, and work in the Legislature to secure laws to check such dishonest attempts to injure the honey industry of Colorado.

"Will the queen deposit eggs in cells that have contained foul brood?" Mr. De Vinney said that they would when crowded.

Keeping Honey from Candying.

"What method is best to keep comb honey in winter from candying?"

Secretary Clark favored a temperature like that in which it was stored. If we can keep it in the same conditions as regards light and heat, as in the hive, we can keep it longer; but honey stored in some conditions, nothing can keep it from candying. Rosin-weed honey would sometimes candy in 48 hours.

"Is foul brood an epidemic, or is it a contagion?"

Mr. Rhodes thought that we must treat it as a clearly defined disease. The remedies recommended have acted as checks, and he thinks next year will demonstrate. This year he began too late, when brood-rearing had ceased. In Colorado it can be checked easier than elsewhere. Stringent legislation is necessary; at the last meeting one member objected to a penalty. In Michigan the law is $100; he had made it $50. When a man refuses to destroy his bees he should be punished. He took Mr. Davis to see a man who had lost all of his colonies but nine, and they were diseased. The committee had asked him to destroy the bees, offering to give him a new start. He would not destroy them, and they are living now. He believed that they had given the disease to Mr. Graves' bees.

Mr. Carlzen said that we ought to have a foul brood law like that in Minnesota concerning mustard seed—if they would not clean it, the county would and charge them for it.

Best Race of Bees.

"Which race of bees are the best honey-gatherers?"

Mr. Davis thought that cross-bred bees stored as good honey as any.

Secretary Clark and Mrs. Rhodes thought that the Italians were the best.

Mr. De Vinney saw no difference in regard to honey-gathering. Blacks had done as well as his nearly pure Italians.

President Milleson said that certain races, whether pure-blooded or hybrid, did better than others. The rule is to adopt the best races, and breed from them to secure a particular strain. This is as important in bee-culture as in cattle-breeding. His experience is that if bees will not sting and fight in defense of their honey, they have very little to spare.

Mr. Bacon thought that this theory would prove the blacks better than the Italians, but he did not believe this.

President Milleson said that hybrids were considered the best by many bee-keepers.

"Which section is the best, the one-piece or the four-piece?"

Secretary Clark preferred the four-piece section, although it took more time to form them than the one-piece. If well put together, the one-piece will do well.

Mr. De Vinney said that the one-piece sections had to be soaked, and if too wet, there was trouble; sometimes they would split in two.

Secretary Clark said that it was hard to crate honey if the one-piece section did not make a perfect square.

Mr. Hurlburt said that too much water was bad; he moistened the inside with a sponge, but did not touch the groove. He would take ten or more and wet them crosswise.

Secretary Clark laid them down, and wet them on the backs, rather than the grooved side; as that swells and the other side does not, there is no danger of breaking.

Prevention of Robbing.

"What is the best way to prevent bees from robbing?"

Mr. Bacon noticed a small swarm, two weeks ago, that had done nothing, and for days they waited on the outside. He thought that they were waiting for others to rob them, and then join them.

President Milleson thought that he would investigate; there must be some reason; it may have been foul brood.

Secretary Clark said that the best way was to narrow the entrance so that only one bee could enter at a time; another method was to make each colony strong.

Mr. Davis was bothered two years ago. If he covered the hive, it stopped the robbing, but the bees could not find their way back. He found an effective way. He opened the hive and let them come in, then killed them with sulphur; in a short time he opened it again, and when filled he gave them another smoking. He killed about 3 colonies, mostly his neighbor's.

Mrs. Rhodes found that if syrup was placed in crocks on the ground, away from the hives, it prevented robbing.

Mr. Knight always narrowed his hive-entrances, and had no trouble.

President Milleson said that bees were like men, if you allowed a man to get some money that he did not earn, he will always seek some way to get other money that he has not earned; and bees will get honey without work if they can.

The Colorado Honey-Yield.

"What is the aggregate yield of honey in Colorado for 1888?" was not answered, as the Secretary said that he was getting honey all the time. The members were directed to report to him by the January meeting. Dr. Shaw urged them to be careful, as their figures were valuable, and none such had ever been collected. The Secretary said that if all would help him, he could get up a column of figures that would astonish our legislators. He would send circulars to every apiarist, but his experience in the Horticultural Society convinced him that not one in ten would report.

Mr. Rhodes had found new bee-men in Boulder county, who had started with 20 colonies; they now had 22, and 1,000 pounds of honey. Wherever he went he tried to get statistics. Dr. Shaw favored personal visitation.

It appears that there is a difference in the tendency of different samples of honey to candy. What is the cause of such a tendency?"

Secretary Clark said that the difference was in the flowers and seasons.

Mr. Pratt said that he had resolved to build a bee-house the next day. Mr. De Vinney said that bees often struck each other in a bee-house, if they were too crowded. Mr. Knight had found that height made no difference; a house 9 feet from the ground did as well as those lower.

Mr. De Vinney said that the Legislative committee should get to work now; they should go to our member of the House and urge the cause; then go to the Speaker of the House, and get him to put this man on the committee.

Stephen R. Pratt, R. H. Rhodes and Henry Knight were appointed committee on Legislation. Messrs. Clark, De Vinney and Hurlburt were appointed a committee on fraudulent honey.

Mr. Pratt said that he would like to have members address him thus: "Box 2804, Denver, Colo.," and state what legislation they desired.

On motion the executive committee was ordered to draw up a programme for the annual meeting on the third Monday in January, 1889. The convention then adjourned until that date.

J. M. CLARK, *Sec.*

SWARMING.

Experiments for Controlling the Swarming Fever.

Written for the American Bee Journal

BY DR. A. E. SMITH.

I carried on some experiments last summer to prevent swarming, and as far as the colonies were concerned, they did not swarm, but produced 140 pounds of comb honey each.

The plan is as follows: I watched the colony closely. Just when I thought they would commence building queen-cells, I opened the hive, took out two frames of brood, shook off most of the bees, looking sharply that I did not have the queen, and put in their places two frames full of foundation. I then replaced the section-cases.

In one week they began to show symptoms of swarming (as I thought), and I removed one frame, and put in its place a frame full of foundation (I use the 10-frame Simplicity hive). In the last removal, I changed the outside for the center frames, putting the four center ones to the outside.

At the first removal I also took out the fourth ones from the outside. In the last removal, I took an outside frame, but the one with the foundation went in the same place that one of the first did.

As I could not experiment on a large scale, and some apiarists may know something of this method, I would ask them, "About what proportion of colonies will it prevent from swarming?" This seems to be enlarging the brood-nest, but it makes no difference what it is, *that* is the way to get the honey.

This was done while I was putting on or taking off section-cases, so it will be seen how much labor it took with those colonies, and the removal.

I should say that at the second removal, and the change of inside for outside frames, I like to uncap as much honey as I think the bees will take care of, and *up* it goes.

This, to me, looked the most feasible in my "well-digested plan," for the production of comb honey, and it was a perfect success. I use a modification of the **T**-super, and "tier up," filling the sections full of foundation, and never forgetting to praise the Italians.

If in another year I could succeed in a large majority of cases, in preventing swarming, that would be well, but I was afraid of an accident, etc. Any information will be thankfully received, and for this purpose I wish to submit it to the correspondents of the AMERICAN BEE JOURNAL.

Darlington, Wis.

Convention Notices.

☞ The Nebraska State Bee-Keepers' Association will convene at Lincoln, Nebr., on Jan. 9, 10 and 11, 1889. J. N. HEATER, *Sec.*

☞ The annual meeting of the Ontario Bee-Keepers' Association will be held at Owen Sound, Ont., on Jan. 8 and 9, 1889. W. COUSE, *Sec.*

☞ There will be a meeting of the Susquehanna County Bee-Keepers' Association at the Court House in Montrose, Pa., on Saturday, May 4, 1889, at 10 a.m. H. M. SEELEY, *Sec.*

☞ The twentieth annual convention of the New York State Bee-Keepers' Association will be held in the City Hall, Syracuse, N. Y., on Dec. 11, 12 and 13, 1888. G. H. KNICKERBOCKER, *Sec.*

CONVENTION DIRECTORY.

1888 *Time and Place of Meeting.*

Dec. 11-13.—New York State, at Syracuse, N. Y.
G. H. Knickerbocker, Sec., Pine Plains, N. Y.

Dec. 12, 13.—Michigan State, at Jackson, Mich.
H. D. Cutting, Sec., Clinton, Mich.

1889.

Jan. 8, 9.—Ontario, at Owen Sound, Ont.
W. Couse, Sec., Streetsville, Ont.

Jan. 9-11.—Nebraska State, at Lincoln, Nebr.
J. N. Heater, Sec., Columbus, Nebr.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Fair Report for 1888.—Mr. Wm. Crouley, Redwood Falls, Nebr., writes:

My report for 1888 is fair. I have obtained something over 3,000 pounds of honey from 48 colonies, spring count, and increased them to 84 colonies and several nuclei. I will send a detailed report of the season when I have more time.

Bees in Good Condition.—Theo. Johnson, Fairbury, Nebr., on Nov. 17, says:

Bees in southern Nebraska only produced about one-fourth as much surplus as usual, but they are all in excellent condition for winter. The honey is of a fine quality, and nearly all in the market.

Feeding Bees for Winter.—Mr. Lemuel Stout, Philadelphia, Pa., Nov. 17, 1888, writes:

I have never lost a colony of bees in wintering. I use the "Hill device" on the summer stands. I have carried the hives one at a time into the kitchen, as late as the middle of November, the colonies having sugar stores of 12 pounds of sugar to 6 pints of boiling water, with no acid, and no further cooking after the water is added. Furthermore, about once a week, on a sunshiny day, I take the covers off of the hives, raise the cotton, open the muslin door, and take a peep in. Some of them cluster on the muslin, and some down among the frames. I do not recollect ever seeing published how fast they will take food. I placed 18 pounds of syrup in a long tin vessel, on one of my hives, at 3 o'clock in the afternoon, and at 6 o'clock the next morning they were running over the bottom of the vessel, averaging 1 1-5 pounds per hour.

Smoking Bees, etc.—T. F. Kinsel, Shiloh, O., on Nov. 19, 1888, writes:

In reading the article on "Bee-Keeping," on page 748, I was particularly attracted by the part of it relative to "smoke." The remarks, if heeded, may be worth the price of the AMERICAN BEE JOURNAL for a year. I have often heard men remark, "Bees won't sting me." It is not true. Bees, at times, without smoke or something to subdue them, will sting the oldest bee-master in the world, if jarred or irritated. When men "never get stung," they, perhaps, only go among bees to handle swarms, or when honey is coming in freely, when there *is* really but little danger unless an accident occurs. Let such men hive swarms when they have become mixed up in the air, or have been fighting—such bees sometimes become savage, and are dangerous to handle even *with* a good smoker. I never use a veil or gloves, yet a good smoker I consider indispensable, especially when doing the last extracting, or preparing the bees for the cellar.

The season here has not been a good one for surplus honey, though the brood-chambers are well filled with bees, and honey enough for winter use.

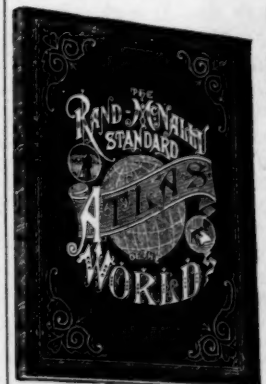
Shaking Bee-Disease—Mignonette.—Frank Waring, Philipsburg, Pa., on Nov. 19, 1888, writes:

Last spring I had 2 colonies of bees which I thought had symptoms of the "shaking disease." Their queens had been reared from one which I had bought. I had read, in the BEE JOURNAL, of people curing the shaking disease by pouring salt brine over the frames. I thought that I would try feeding salt brine in the open air; so I procured a small trough, put salt and water into it, and placed it near the hives, but not a bee was seen on it until after one night, when it rained hard, overflowing the trough; the next morning the bees were busy, and continued working on it for weeks. I filled it up with water, and added salt to suit their taste. All signs of the shaking disease disappeared before fall.

This fall my sister had one small plot of dwarf mignonette, one of mammoth mignonette, and one of Alsike clover, in bloom at the same time, the first crop of Alsike having been cut off when in bloom. When the small mignonette had 20 or 30 bees on it, the mammoth would have about half as many, and the Alsike clover would have 2 or 3 bees on it. If we had plenty of that small mignonette it would keep bees from robbing late in the fall, when the frost has killed more tender plants.

A Magnificent Present

For every one who will send us a Club of five *new* subscribers for 1889, before next January. All the remaining issues of this year *free* to new subscribers.



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THOS. G. NEWMAN & SON,
923 & 925 W. Madison-St., - CHICAGO, ILLS.

Honey and Beeswax Market.

CHICAGO.

HONEY.—We quote: White clover 1-lbs., 18@19c.; 2-lbs., 16@17c. Good dark 1-lbs., 15@16c.; 2-lbs., 13@14c. Buckwheat 1-lbs., 14@15c.; 2-lbs., 12@12½c.—Extracted, 7@9c., depending upon quality and style of package. Receipts increasing, but demand still limited. Stock is not selling as freely this season as a year ago.

BEESWAX.—22c.

Nov. 13. S. T. FISH & CO., 189 S. Water St.

CHICAGO.

HONEY.—It is selling fairly well at 18c. for best 1-lbs.; very fancy lots have sold at 20c. Dark and yellow comb sells slowly at 13@16c. Extracted, 7@9c., according to quality and style of package. The stock of best comb honey is light.

BEESWAX.—22c. R. A. BURNETT,

Nov. 22. 161 South Water St.

MILWAUKEE.

HONEY.—We quote: Fancy white 1-lbs., 18@20c.; 2-lbs., 16@18c. Good dark 1-lbs., 16@18c.; 2-lbs., 15 to 16c.; fair 1-lbs., 12½@14c. Extracted, white, in kegs and ½-barrels, 8½@9c.; amber in same, 7½@8c.; in pails and tin, white, 9@9½c.; in barrels and half-barrels, dark, 6@6½c. Market steady and supply ample for the moderate demand, but present values have a tendency to restrict general consumption.

BEESWAX.—22@23c.

Oct. 25. A. V. BISHOP, 142 W. Water St.

NEW YORK.

HONEY.—We quote: Fancy white 1-lbs., 15@17c. 2-lbs., 14@16c. Fair white 1-lbs., 14@16c.; 2-lbs., 13 to 15c. Extracted, white, 7½@8c.

BEESWAX.—23½c.

Sep. 17. THURBER, WHYLAND & CO

NEW YORK.

HONEY.—We quote: Fancy white 1-lbs., 17@18c.; 2-lbs., 13@14c. Fair white 1-lbs., 15@16c.; 2-lbs., 12c. Buckwheat 1-lbs., 11@12c.; 2-lbs., 10@11c. White extracted, 7½@8½c.; buckwheat, 5½@6½c.; California extracted, white sage, 7½@7¾c.; amber, 7¼@7½. Demand good and prices firm. New comb honey is arriving quite freely.

BEESWAX.—23@23½c.

HILDRETH BROS. & SEGELKEN,

Oct. 10. 28 & 30 W. Broadway, near Duane St.

SAN FRANCISCO.

HONEY.—White 1-lb. sections, 12@12½c.; 2-lbs., 12@14c.; amber, 8@10c. Extracted, white, 6½@6¾c.; light amber, 6c.; amber and candied, 5¼@5½c. For comb honey the demand is light; for extracted it is good, and market firm.

BEESWAX.—Dull at 18@22c.

Nov. 15. O. B. SMITH & CO., 423 Front St.

DETROIT.

HONEY.—Best white 1-lbs., 17@18c. Supply is better. Extracted, 8@9c. Sales slow.

BEESWAX.—22@23c.

Nov. 17. M. H. HUNT, Bell Branch, Mich.

CINCINNATI.

HONEY.—We quote extracted at 5@8c. per lb. Best white comb honey, 16c. Demand slow.

BEESWAX.—Demand is good—20@22c. per lb. for good to choice yellow, on arrival.

Nov. 12. C. F. MUTH & SON, Freeman & Central Av.

KANSAS CITY.

HONEY.—Choice 1-lb. sections, 18c.; dark 1-lbs., 14c.; 2-lbs., 16c.; dark, 13c. White extracted in 60-lb. cans, 8c.; amber, 7c.; in barrels and kegs, 5@8c. Demand good, prices steady, and stock fair.

BEESWAX.—None in market.

Sep. 27. HAMBLIN & BEARSS, 514 Walnut St.

NEW YORK.

HONEY.—We quote: Fancy white 1-lb. sections, 17½@18c.; 2-lbs., 14@15c. Fair 1-lbs., 14½@15½c.; 2-lbs., 11@12c. Extracted, fancy white clover, 7½@8½. California white in 60-lb. cans, 8c.; light amber, in same cans, 7½c.; amber, 7¼c. Buckwheat in kegs and barrels, 5½@6. Cuban, in barrels and ½-barrels, 65c. per gallon.

Sep. 26. F. G. STROHMEYER & CO., 122 Water St.

BOSTON

HONEY.—We quote: Best white clover 1-pounds, 17@18c.; best 2-lbs., 16@17c. Extracted, 8@9c. The receipts are very light, and honey sells fairly well.

Nov. 12. BLAKE & RIPLEY, 57 Chatham Street.

KANSAS CITY.

HONEY.—White 1-lbs., 17c.; fair, 14c.; California white 1-lbs., 17c.; 2-lbs., 15c. Extracted white California, 7½c.; amber, 7c.

BEESWAX.—None in the market.

Nov. 22. CLEMONS, CLOON & CO., cor 4th & Walnut.

ST. LOUIS.

HONEY.—We quote: Extracted in barrels, 5@6c., according to quality; in cans, 7@8c. Comb, 12½@15c. Prices firmer on account of scarcity, though the demand is not great.

BEESWAX.—21c. for prime.

Oct. 17. D. G. TUTT & CO., Commercial St.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 6½ cents; light amber, 6@6½c.; amber, 5½c. Comb, white 1-lbs., 13@14c.; 2-lbs., 13c. Light amber 1-lbs., 12@13c.; 2-lbs., 11@12c. Demand very active for extracted, and fair for comb honey.

BEESWAX.—20@21c.

Nov. 6. SCHACHT & LEMCKE, 122-124 Davis St.